

translation

PATENT COOPERATION TREATY

PCT/JP2003/015928



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FP-8522PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2003/015928	International filing date (day/month/year) 12 December 2003 (12.12.2003)	Priority date (day/month/year) 13 December 2002 (13.12.2002)
International Patent Classification (IPC) or national classification and IPC C08L 79/08, B32B 27/34, C23C 18/22, H05K 1/03		
Applicant KANEKA CORPORATION		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☐ (sent to the applicant and to the International Bureau) a total of \_\_\_\_\_ sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:
  - ☒ Box No. I Basis of the report
  - ☐ Box No. II Priority
  - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - ☐ Box No. IV Lack of unity of invention
  - ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - ☐ Box No. VI Certain documents cited
  - ☐ Box No. VII Certain defects in the international application
  - ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 09 April 2004 (09.04.2004)	Date of completion of this report 15 September 2004 (15.09.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/015928

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ The international application as originally filed/furnished

☐ the description:  
 pages \_\_\_\_\_, as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ the claims:  
 pages \_\_\_\_\_, as originally filed/furnished  
 pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ the drawings:  
 pages \_\_\_\_\_, as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement	Novelty (N)	Claims	7-11	YES
		Claims	1-6, 12-21	NO
Inventive step (IS)		Claims		YES
		Claims	1-21	NO
Industrial applicability (IA)		Claims	1-21	YES
		Claims		NO

## 2. Citations and explanations (Rule 70.7)

Document 1: US, 6286207, B1 (NEC Corporation), September 11, 2001 (09.11.01), Full text & JP, 2000-17444, A

Document 2: JP, 2001-332864, A (Sumitomo Metal (SMI) Electronics Devices Inc.), November 30, 2001 (11.30.01), Claims, Paragraphs 0004-0005, 0007 and 0009-0016

Document 3: JP, 2002-307608, A (Kaneka Corporation), October 23, 2002 (10.23.02), Claims, Paragraphs 0001, 0026-0032, 0038-0039, 0041 and 0048-0066, Embodiment, Fig. 1-Fig. 2F

### Claims 1-5

The inventions relating to claims 1-5 are described in documents 1-2 cited in the ISR; therefore, they do not appear to be novel or involve an inventive step.

Documents 1-2 describe a polyimide resin material wherein, in consideration of bonding strength with an electroless plating film, a surface is subject to treatment such as roughening. Also, they describe the point of keeping surface roughness low in consideration of the fineness of wiring and other factors. On the other hand, as described in document 3 (embodiments), sufficient bonding strength between an electroless plating film and polyimide resin material is normally at least 5N/cm. Thus, it cannot be said that there is any difference in bonding strength between the inventions relating to claims 1-4 and the inventions described in documents 1-2.

(As described in document 3 (paragraphs 0038-0039), the various surface treatment methods of a polyimide resin material used in the present invention are well known to a party skilled in the art.)

### Claim 6

The invention relating to claim 6 is described in documents 1-2 cited in the ISR; therefore, it does not appear to be novel or involve an inventive step. As can be seen from the description of document 3, the polyimide described in claim 6 is commonly used in the relevant technical fields.

### Claims 7-11

The inventions relating to claims 7-11 do not appear to involve an inventive step based on documents 1-3 cited in the ISR.

As described in document 3, in a printed wiring board, using a multilayer body comprising a layer made of an electroless plating film and polyimide film and an adhesion layer made of a thermosetting resin including a polyimide resin is commonly carried out by a party skilled in the art.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.  
Continuation of Box V:

Claims 12-15

The inventions relating to claims 12-15 do not appear to be novel or involve an inventive step based on documents 1-2 cited in the ISR.

From the standpoint of technical concepts, it cannot be said that there is any difference in surface roughness between the inventions relating to claims 12-15 and the inventions described in documents 1-2.

Claims 16-21

The inventions relating to claims 16-21 do not appear to be novel or involve an inventive step based on documents 1-2 cited in the ISR. Regarding a manufacturing method of a printed wiring board, the inventions relating to claims 16-21 are merely using an ordinary method.